

To: Blankenship, Melissa[Blankenship.Melissa@epa.gov]
From: Werner, Sam E LRL
Sent: Mon 10/21/2013 6:55:52 PM
Subject: FW: LRL-2013-423-sew Somerville South Mine Amd. 3

Melissa,

This is the addl. info request I sent to Peabody for Somerville South Amd. 3. The Corps is currently having issues with the scanners district wide. They are attempting to resolve those issues. Once they have it working again I will get the information they provided me in response to this e-mail as well as the Vigo Sunna response to your comments.

Thanks,
 Sam Werner
 Regulatory Project Manager
 U.S. Army Corps of Engineers
 P.O. Box 489
 Newburgh, Indiana 47629
 Phone(812)842-2768
 Fax(812)858-2678

-----Original Message-----

From: Werner, Sam E LRL
 Sent: Tuesday, September 17, 2013 3:52 PM
 To: 'West, Bryce'
 Cc: 'McGarvie, Scott D.'; 'Nelson, Ann M'
 Subject: LRL-2013-423-sew Somerville South Mine Amd. 3

Dear Mr. West:

This is in regard to your Department of the Army (DA) permit application dated May 1, 2013 and revised July 29, 2013, requesting authorization to conduct surface coal mining operations resulting in the discharge of dredged or fill material into "waters of the U.S." on a 1764.4 acre site located approximately 2 miles west of Lynnville, Warrick County, Indiana. We have reviewed your application under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act to determine the need for a DA permit.

Based on our review of the submitted data, it has been determined that additional information will be required before we can make a determination for a permit. Please change and/or provide the following information:

1. On Block 22 atch. and in the narrative p. 66 and other locations, we need to have a proposed ratio of 3:1 for PFO wetlands in the absence of functional assessments.
2. On pg. 7 of the narrative and in any other locations, an incorrect quantity of PFO wetlands is stated as 22.62 acres.
3. On pg. 60, 2nd paragraph under streams, it states that there will be a lift in regard to enhanced riparian buffer, and natural stream configuration. While this may often be true in many circumstances, it appears that many of the existing streams will actually have a reduction in riparian buffer and many of the existing streams already exhibit a natural stream planform. We do however concur that entrenchment could be reduced in many of the existing streams. Please change that language to be more specific to the applicable streams.
4. On p. 60, final paragraph, it states that there will be "rock sills" utilized for grade control. Please explain the concept of a rock sill and provide detailed drawings including plan and profile views of such structures.
5. On p. 65, it states that the proposed wetland mitigation site is in a currently agricultural land use. This appears to be largely incorrect based on available data. The majority of the proposed wetlands are located within areas that currently have an existing hardwood forest cover. As such, it would be difficult to improve on the functions of the existing wetlands. The best we can hope for is that by increasing ratios

over those existing wetlands we can provide greater quantities of similar functions. Please change the narrative to more accurately describe what is existing versus what we are attempting to mitigate with.

6. Overall wetland mitigation needs to be redesigned. Many of the existing wetlands also have groundwater inputs as well as overbank flow and precipitation for their hydrology regime. The mitigated wetlands are proposed to receive their hydrology from overbank flow and precipitation. The groundwater component will largely be missing from the inputs in the post mining landscape. Also, many of the proposed wetlands lie adjacent to ephemeral streams. Most ephemeral streams by design don't have floodprone areas as they flow only in response to rainfall. As such, they will not have floodplains to supply a source of hydrology to the wetlands. It appears that there will not be enough hydrology on the site to supply the proposed quantity of wetland on the proposed site. We would suggest an off-site component to supplement the existing wetland proposal. You could remove some of the proposed wetlands on site and propose additional mitigation off-site.

7. On page 74, there are various references to wood riffles. Typically, engineered riffles are of durable rock material of specific size. By Corps definition, riffles are comprised of rapidly moving water of a coarse substrate. Usually woody material does not furnish the appropriate characteristics nor durability to form a true riffle sequence.

8. On page 75, there is language about how riffles would be constructed. It would seem appropriate for engineered riffles in lower sloped streams to be more frequent than 1 in every 6 meanders. As well, for streams over 4%, there is more typically a step pool sequence rather than a riffle/pool sequence. We would like to see stream designs consisting of more natural sinuosity (low or moderate) and morphology on the greater sloping streams (A & B type).

9. On pg. 75, 1st paragraph, there is language stating that "the engineered structures may need to be modified somewhat as the stream is constructed from the details as shown on maps D2 to D5 in Appendix A". This is problematic because we need to see how these structures will be put in place. Add in the narrative that the structure will be constructed in accordance with the plans and any field deviation will be coordinated with the Corps prior to implementation. From past observation at many mitigation sites, the reclaimed mine site consists of deep unconsolidated materials which are subject to instability. Any of these structures need to be keyed into the bed of the stream and in the case of log or rock cross vanes and j-hooks, they need to have footer rocks placed deeper than normal to prevent erosion through the structure. Additionally, the log vanes as depicted on map D5 shows the logs buried on both ends within the stream bed. A quick search will demonstrate the proper placement of the log vanes.

Generally, log or logs if needed to key into the bed will extend above bed level in the outer 1/3 of the stream bed. This creates an eddy behind the log depositing material on the outside bank, diverting the thalweg to the center of the channel and helps to maintain a pool on the downstream side of the log. By burying the log completely in the substrate, there is no function being immediately recognized within the stream. Please follow the drawings you have submitted in appendix H of the submittal to reflect proper placement of these structures. Also make it clear which types of structures you will or will not use. Though you may not plan to use them in a regular pattern but we would like to see some of the habitat and stability functions these structure provide. You describe and depict log vane structures but we have not seen an example of them in place for quite some time on any existing mitigation.

10. On pg. 80 and 81, change the tree planting success criteria to be consistent with the last permitted action you received (Bear Run ammd. 5). I believe the criteria were 300 hard mast tree species with 50% and 80% survival in wetlands and riparian zones respectively, and 50% of those surviving trees must reach 15' height prior to release from monitoring.

11. On pg. 81 under the wetlands section it states that "a 5 year monitoring period will be employed to monitor and evaluate success of the advance off-site wetland mitigation". Please provide location and acreage detail regarding this advance off-site mitigation area. If the off-site location is significant enough we may be able to ignore comment #6 above.

12. On pg. 81, last paragraph and on page 83, change 5% to 14 or more consecutive days of flooding, ponding, or saturation within the upper 12 inches. Also, provide a map depicting the monitoring well locations within the proposed wetland mitigation areas to prove hydrology criteria as well as the methodology for installing and monitoring the wells.

13. Change all references to mitigation monitoring to a minimum of 5 years and until officially released by the Corps.

14. On pg. 82, the narrative makes reference to 2 stage channel design. With the exception of the Smith Fork Channel, no credit will be give for 2 stage channel design. All other stream mitigation shall be

proposed with a natural pattern, profile and dimension. If this type of mitigation cannot be completed on the proposed site, off-site mitigation should be proposed to further off-set losses.

15. On pg. 82, it makes mention under the financial assurances section that SMCRA requires bond sufficient to cover the cost of reclamation.....all of which covers the mitigation proposed in this application. This bond does not provide the Corps with any assurances as to the success and sustainability of Section 404 mitigation. The IDNR will likely release the bond as it does without ensuring that the streams and wetlands are mitigated and successful. The Corps has no legal authority to require SMCRA to forfeit bond due to unsuccessful Section 404 mitigation and as such it affords us no opportunity to leverage companies to put serious efforts into mitigation success nor to direct a 3rd party to correct deficiencies in the mitigation.

16. Add Rosgen classification criteria to stream success standards on p.84.

17. Show proposed monitoring locations for mitigation on a site map.

18. On pg. 85, change sample plot data to 30' radius to be consistent with the 87 manual regional supplements. A similar area can be done in a belt transect method for narrow areas such as stream riparian zones.

19. On pg. 85 change sample plot data for streams from 1500 linear feet to 300, 500, and 1500 for ephemeral, intermittent, and perennial respectively.

20. On pg. 85 change to what is included in the monitoring report to include a new longitudinal profile of each stream every 2 years.

21. On pg. 86 change the description of the assessments to 2 full assessments at each monitoring site.

22. On pg. 86, Section II, revise the function/value replacement discussion. Many of the listed items are not enhancements but are rather direct attempts at replacement. While this office concurs that you have the opportunity to decrease entrenchment and allow access to an active floodplain, we will actually be losing riparian buffer on many of the streams. Additionally, the majority of the streams have existing riffle/pool complexes as well as appropriate sinuosity leaving little room for "enhancements". There are exceptions but we don't want a blanket statement conveying an improvement for each stream on the entire site when the best we can do is to potentially replace it with some decrease in entrenchment.

You are reminded that all drawings must be submitted on 8½ x 11-inch paper and be of reproducible quality. Your application has been assigned ID No. LRL-2013-423-sew. Please reference this number on all correspondence pertaining to this project. If you have any questions regarding the requested information, please contact this office by writing to the above address, ATTN: CELRL OP FW or by calling me at (812) 842-2768.

Sincerely,

Sam Werner

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U.S. Army Corps of Engineers
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